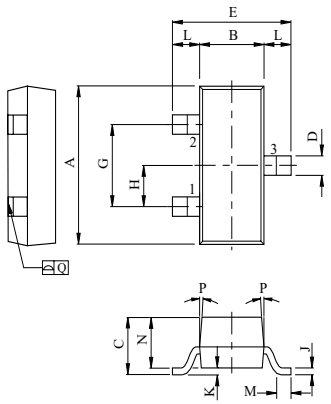
BC856/7/8

EPITAXIAL PLANAR PNP TRANSISTOR

GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION .

FEATURES

· For Complementary With NPN Type BC846/847/848.



DIM	MILLIMETERS
A	2.93±0.20
B	1.30+0.20/-0.15
C	1.30 MAX
D	0.40+0.15/-0.05
E	2.40+0.30/-0.20
G	1.90
H	0.95
J	0.13+0.10/-0.05
K	0.00 ~ 0.10
L	0.55
M	0.20 MIN
N	1.00+0.20/-0.10
P	7°
Q	0.1 MAX

1. EMITTER
2. BASE
3. COLLECTOR

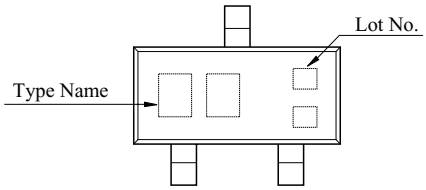
SOT-23

MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	BC856	V_{CBO}	-80	V
	BC857		-50	
	BC858		-30	
Collector-Emitter Voltage	BC856	V_{CEO}	-65	V
	BC857		-45	
	BC858		-30	
Emitter-Base Voltage	BC856	V_{EBO}	-5	V
	BC857		-5	
	BC858		-5	
Collector Current		I_C	-100	mA
Emitter Current		I_E	100	mA
Collector Power Dissipation		P_C *	350	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 150	℃

P_C* : Package Mounted On 99.5% Alumina 10×8×0.6mm.

Marking



MARK SPEC

TYPE	BC856A	BC856B	BC857A	BC857B	BC857C	BC858A	BC858B	BC858C
MARK	3A	3B	3E	3F	3G	3J	3K	3L

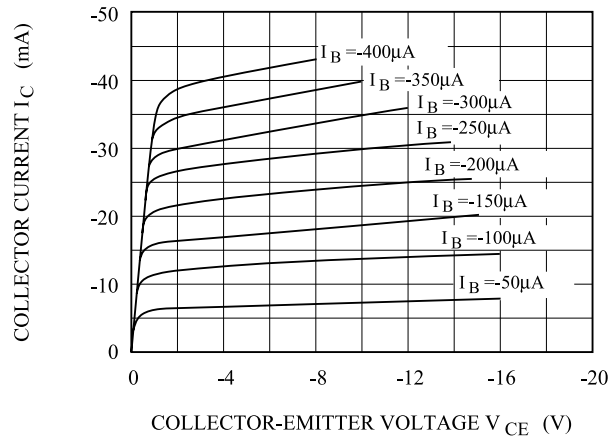
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-30V, I_E=0	-	-	-15	nA
DC Current Gain (Note)	BC856	h_{FE}	V_{CE}=-5V, I_C=-2mA	125	-	475	
	BC857			125	-	800	
	BC858			125	-	800	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$ 1	I_C=-10mA, I_B=-0.5mA	-	-0.09	-0.3	V
		$V_{CE(sat)}$ 2	I_C=-100mA, I_B=-5mA	-	-0.25	-0.65	
Base-Emitter Saturation Voltage		$V_{BE(sat)}$ 1	I_C=-10mA, I_B=-0.5mA	-	-0.7	-	V
		$V_{BE(sat)}$ 2	I_C=-100mA, I_B=-5mA	-	-0.9	-	
Base-Emitter Voltage		$V_{BE(ON1)}$	V_{CE}=-5V, I_C=-2mA	-0.6	-0.65	-0.75	V
Base-Emitter Voltage		$V_{BE(ON2)}$	V_{CE}=-5V, I_C=-10mA	-	-	-0.82	V
Transition Frequency		f_T	V_{CE}=-5V, I_C=-10mA, f=100MHz	-	150	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	-	4.5	-	pF
Noise Figure		NF	V_{CE}=-6V, I_C=-0.2mA R_g=2kΩ, f=1kHz	-	2.0	10	dB

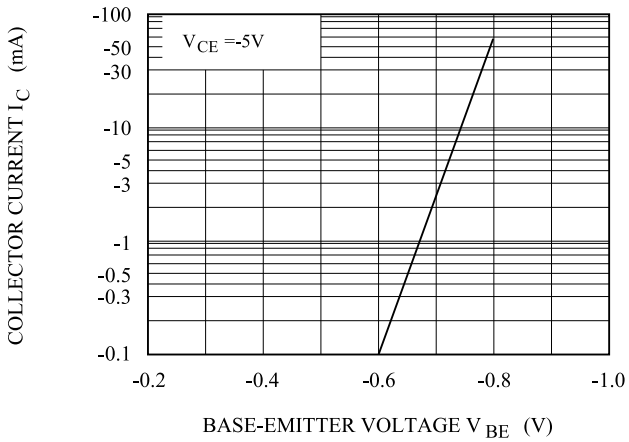
NOTE : According to the value of h_{FE} the BC856, BC857, BC858 are classified as follows.

CLASSIFICATION		A	B	C
h_{FE}	BC856	125 250	220 475	-
	BC857	125 250	220 475	420 800
	BC858	125 250	220 475	420 800

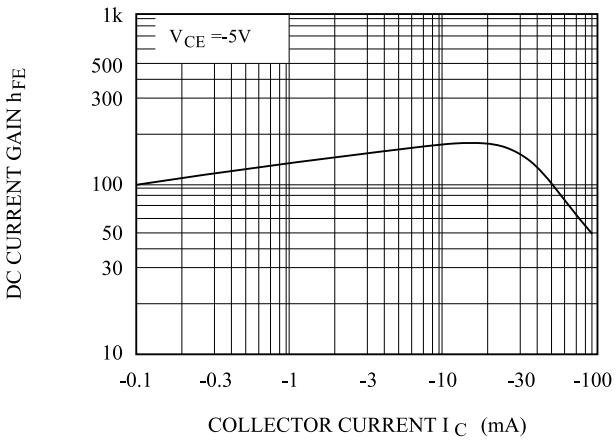
I_C - V_{CE}



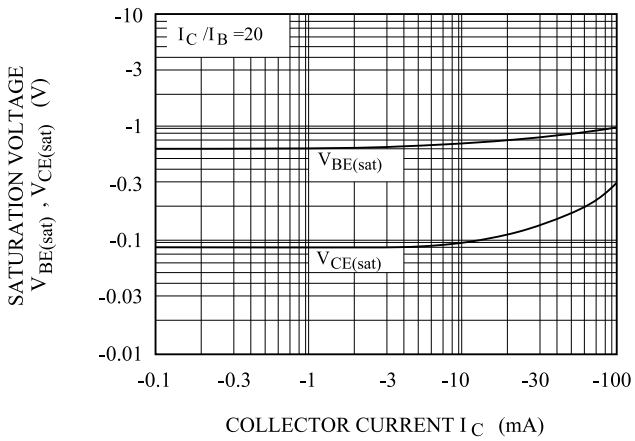
I_C - V_{BE}



h_{FE} - I_C



$V_{BE(sat)}$, $V_{CE(sat)}$ - I_C



C_{ob} - V_{CB}